ABSTRACT OF DISCLOSURE

An automated guided vehicle control system and method which allows overall conveying time to be reduced by simultaneously moving a plurality of automated guided vehicles (AGVs) to working locations without interfering with each other. For this purpose, when there is a conveyance request, one of a plurality of the AGVs operated on a single guide path is assigned work. Further, it is determined whether another automated guided vehicle moving to a working location exists on the guide path. Also information on current and working locations of the automated guided vehicles is read if the automated guided vehicle moving to the working location exists on the guide path. Further, it is determined whether simultaneous movements are possible based on the read information. The automated guided vehicle waiting for work is moved if the simultaneous movements are possible. Accordingly, the overall convey time is reduced by simultaneously moving the AGVs to working locations or by previously moving the AGVs to optimal locations without interfering with each other, so that conveying efficiency of the AGVs is improved.